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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/649,692 | 08/28/2000 | Tyler E. Pease | 141.009 | 8406 |

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| EXAMINER |
|---|
| HORTON, YVONNE MICHELE |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3635 | |

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

| Application No. | Applicant(s) |
|---|---|
| 09/649,692 | TYLER E. PEASE |
| **Examiner** | **Art Unit** |
| YVONNE M. HORTON | 3635 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *Feb 10, 2003* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *13 and 16-20* is/are allowed.

6) ☒ Claim(s) *1-5, 11, 12, 14, 15, and 21-33* is/are rejected.

7) ☒ Claim(s) *6-10* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Withdrawal of Allowable Subject Matter*

The indicated allowability of claims 3-6,10 and 23 is withdrawn in view of the reference(s) to NOGRADI and Beliveau, and a more careful review of FORD. Rejections based on the newly cited reference(s) follow.

### *Response to Amendment*

The amendment filed 2/10/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material that is not supported by the original disclosure is as follows: there is no support in the specification for the reinforcing strips having a combination of slots and holes. The specification only details the use of either holes or slots and makes no mention of the possibility of a combination thereof.

Applicant is required to cancel the new matter in the reply to this Office Action.

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3,25,26 and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER. FORD discloses an insulated wall panel (10) including a sheet (15) having first (FE) and second (SE)

planar sides and grooves (26), first and second reinforcing strips (24) have portions (IP) disposed inwardly from the first (FE) and second edges (SE) and received within respective grooves (26), and first and second reinforcing layers (12) forming first and second planar sides. FORD discloses the basic claimed panel except for the core being foam. FORD discloses that his core is formed from an oriented strand board material. PORTER teaches that it is known in the art to form an insulated wall panel with a foam core sheet (16), column 2, line 63. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of FORD with the foam core of PORTER in order to maintaining the panels' structural integrity and insulative properties while also providing the panel with moisture resistive properties and while also having a core that allows the metal members embedded therein to bond easily thereto. Regarding claim 2, FORD also discloses two downwardly extending flanges (F), see the marked-up attachment. In reference to claim 3, neither FORD or PORTER teaches texturing the reinforcing strips. However, texturing a metal surface especially to improve bonding or to aid in drilling screws is old and very well known in the art. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to texture the surface of the first and second reinforcing strips (24) in order to aid in obtaining a safe and direct insertion of a fastener therethrough. Regarding claim 25, the reinforcing strips (24) of FORD have outward facing surfaces, similar to (IP) configured to guide fasteners (28). In reference to claim 26, although FORD does not detail texturing his reinforcing member, texturing metal reinforcing members is old and very well known in the art. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to texture the surface of the first and second reinforcing strips (24) in order to aid in obtaining a safe and direct insertion of a fastener therethrough. Regarding claim 28, the outward face (IP) has holes

(34). In reference to claim 29-32, FORD does not detail the distance between reinforcing member. It would have been oblivious to one having ordinary skill in the art at the time the invention was made to space the reinforcing members accordingly to obtain the required amount of rigidity and stability as an obvious matter of design choice. Regarding claim 33, FORD is silent with regards to the material of his first and second facings. However, PORTER teaches that his first and second reinforcing layers (12,14) are plastic impregnated paper. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the outer facings of FORD from the plastic impregnated paper of PORTER in order to increase the tensile strength of the panel.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER and US Patent #4,961,298 to NOGRADI. FORD discloses an insulated wall panel (10) including a sheet (15) having first (FE) and second (SE) planar sides and grooves (26), first and second reinforcing strips (24) have portions (IP) disposed inwardly from the first (FE) and second edges (SE) and received within respective grooves (26), and first and second reinforcing layers (12) forming first and second planar sides. FORD discloses the basic claimed panel except for the core being foam and except for the reinforcing strips having a hole or a slot therein. FORD discloses that his core is formed from an oriented strand board material. PORTER teaches that it is known in the art to form an insulated wall panel with a foam core sheet (16), column 2, line 63; and NOGRADI teaches that it is known in the art to provide a reinforcing strip with a plurality of openings (16). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of FORD with the foam core of PORTER and the plurality of spaced openings of NOGRADI in order to maintaining the panels' structural

integrity and insulative properties while also providing the panel with moisture resistive properties, having a core that allows the metal members embedded therein to bond easily thereto, and providing the panel with an opening for easier insertion of a fastener therein. In further regards to claim 5, although NOGRADI only teaches holes, it too would have been obvious to one having ordinary skill in the art to provide the panel of FORD with slots, since holes and slots are art recognized equivalents in aiding in increased bonding and insertion of fasteners.

Claims 11,12,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER and US Patent #4,961,298 to NOGRADI. The structure of FORD inherently discloses the method of manufacturing an insulated panel including the steps of creating a block (15); cutting the block as at (26); inserting reinforcing strips (24), covering the strips (24) with a reinforcing layer (12); and bonding the first reinforcing layer (12) to the foam sheets (15). Regarding claim 12, bonding a second reinforcing layer (12). FORD discloses the basic claimed structure except for mechanically texturing the strips. Texturing metal and plastic members prior to insertion of securing devices and prior to application of adhesives and other similar materials is old and very well known in the art. Thus, it would have been obvious to one having ordinary skill in the art to texture the strips of FORD in order to prevent the securing devices from slipping while being inserted. FORD discloses the basic claimed panel except for the core being foam and except for the reinforcing strips having a hole or a slot therein. FORD discloses that his core is formed from an oriented strand board material. PORTER teaches that it is known in the art to form an insulated wall panel with a foam core sheet (16), column 2, line 63; and NOGRADI teaches that it is known in the art to provide a reinforcing strip with a plurality of openings (16). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to provide the panel of FORD with the foam core of PORTER and the plurality of spaced openings of NOGRADI in order to maintain the panels' structural integrity and insulative properties while also providing the panel with moisture resistive properties, having a core that allows the metal members embedded therein to bond easily thereto, and providing the panel with an opening for easier insertion of a fastener therein. Regarding claims 14 and 15, FORD discloses the basic claimed method except for the steps of applying adhesive and rolling the reinforcing layers. Although FORD does not disclose the use of and adhesive, it would have been obvious to one having ordinary skill in the art to provide the panel of FORD with adhesive in order to provide the panel and its exterior face with additional reinforcement in ensuring the facings are maintained properly against the foam sheet.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER. FORD discloses the method of manufacturing an insulate panel (10) including creating a rigid block (15); cutting the block (15) by simultaneously drawing a hot wire path therethrough, column 3, line 56; inserting first and second reinforcing strips (24), and bonding first and second facings (12,14). FORD discloses the basic claimed panel except for the core being foam. FORD discloses that his core is formed from an oriented strand board material. PORTER teaches that it is known in the art to form an insulated wall panel with a foam core sheet (16), column 2, line 63. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of FORD with the foam core of PORTER in order to maintain the panels' structural integrity and insulative properties while also providing the panel with moisture

resistive properties, and creating a core that allows the metal members embedded therein to bond easily thereto.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER, as applied to claim 3 above, and further in view of US Patent #5,893,248 to BELIVEAU. FORD, as modified by PORTER, discloses the basic claimed panel except for the use of a central recessed portion. BELIVEAU teaches that it is known in the art to provide a reinforcing strip (18,19) with a central recessed portion (30). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the reinforcing members of FORD with the central recessed portion of BELIVEAU in order to increase the rigidity of the reinforcing member while also allowing for placement of the head of a fastener (28) in FORD, BELIVEAU, column 3, line 32-34.

Claims 23 AND 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,638,651 to FORD in view of US Patent #6,408,594 to PORTER and further in view of US Patent #5,893,248 to BELIVEAU. FORD discloses an insulated wall panel (10) including a sheet (15) having first (FE) and second (SE) planar sides and grooves (26), first and second reinforcing strips (24) have portions (IP) disposed inwardly from the first (FE) and second edges (SE) and received within respective grooves (26), and first and second reinforcing layers (12) forming first and second planar sides. FORD discloses the basic claimed panel except for the core being foam and except for the reinforcing strips having a central recess. FORD discloses that his core is formed from an oriented strand board material. PORTER teaches that it is known

in the art to form an insulated wall panel with a foam core sheet (16), column 2, line 63; and BELIVEAU teaches that it is known in the art to provide a reinforcing strip (18,19) with a central recessed portion (30) and two non-recessed portions (22). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the panel of FORD with the foam core of PORTER and the central recessed portion/non-recessed portion of BELIVEAU in order to maintain the panels' structural integrity and insulative properties, and increasing the rigidity of the reinforcing member while also allowing for placement of the head of a fastener (28) in FORD. Regarding claim 24, the head of the fastener would rest in the recessed portion, BELIVEAU, column 3, lines 32-34.

***Previously Indicated Allowable Subject Matter***

Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13 and 16-20 remain as being allowable.

***Response to Arguments***

Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909.

Y. Horton
Patent Examiner

US005638651A

# United States Patent [19]

Ford

[11] Patent Number: 5,638,651

[45] Date of Patent: Jun. 17, 1997

[54] **INTERLOCKING PANEL BUILDING SYSTEM**

[76] Inventor: **Vern M. Ford**, 6287 N. 25 E., Idaho Falls, Id. 83401

[21] Appl. No.: **668,238**

[22] Filed: **Jun. 21, 1996**

**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 295,598, Aug. 25, 1994, abandoned.

[51] **Int. Cl.**[6] ..... **E04C 2/30**; E04C 2/292

[52] **U.S. Cl.** ..... **52/309.7**; 52/90.1; 52/265; 52/269; 52/271; 52/284; 52/293.3; 52/277; 52/309.9; 52/794.1; 52/800.12

[58] **Field of Search** ..... 52/90.1, 92.1, 52/93.2, 262, 264, 265, 267, 269, 271, 274, 284, 293.3, 309.7, 309.9, 309.11, 309.16, 592.1, 592.3, 656.4, 794.1, 800.1, 800.11, 800.12, 801.1, 802.1, 276, 277, 279

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[57] **ABSTRACT**

This invention discloses to an interlocking insulated panel building system that has expanded polystyrene panels sandwiched between inner and outer oriented strand board (OSB) skins. Structural strength is enhanced and thermal shorts are reduced by use of channels formed from typically 22 gauge (0.03") galvanized steel. The panels are interfitted by a tongue-and-groove system. The components of the system are wall panels, headers, sills, beams, and roof panels.

**15 Claims, 8 Drawing Sheets**